

REMARKS

Reconsideration of this application, as amended, is respectfully requested.

Claims 1-15 are pending. Claims 1-15 stand rejected.

Claims 3, 11-14 have been amended. No claims have been cancelled. Claims 16-21 have been added. Support for the amendments is found in the specification, the drawings, and in the claims as originally filed. Applicants submit that the amendments do not add new matter.

Double Patenting

Claims 1-15 are rejected using a double patenting rejection under 35 U.S.C. 101 as claiming the same invention as that of claims 1-11 of prior U.S. Patent No. 6,751,658 to Christopher K. Haun, et al. ("Patent 658").

Applicants respectfully disagree with a double patenting rejection. The Examiner stated

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter....

(p. 2, Office Action 11/04/2004)

In fact, Patent 658 claims tracking modifications in the user shadow volume, which represents a read/write portion of the one or more system volumes containing operating system software, leaving the other portion of the one or more system volumes containing operating system software for use by other NC clients unmodified ("read only"), as recited in claim 1 of Patent 658. In contrast to the present application, Patent 658 does not claim replacing a first set of one or more system volumes containing a first operating system with a second set of one or more system volumes containing a second operating system to cause other of the plurality of NC clients to receive the second operating system that is different from the first operating system, as recited in claim 1.

Claim 1 of Patent 658 and Claim 1 of the instant application read as follows.

(Claim 1, Patent 658)

A method comprising: a network computer (NC) client booting from a boot image provided by an NC server, the boot image including information identifying the location of one or more user system volumes on the NC server, the NC client locally executing the boot image and mounting the one or more system volumes, the one or more user system volumes containing operating system software; and in response to an attempt to modify the contents of the one or more user system volumes, the NC client causing information identifying a modification associated with the attempt to be recorded on the NC server separate from the one or more user system volumes in a shadow system volume associated with the NC client

wherein the one or more system volumes are presented to the NC client as a split operating system including a core operating system volume that can be read but not written by the NC client and the user operating system volume that can be read and/or written by the NC client, wherein the storage area associated with the NC client comprises the shadow volume corresponding to the user operating system volume, and wherein the NC client causing information identifying a modification associated with the attempt to be recorded comprises tracking modifications to the user operating system volume in the shadow volume.

(emphasis added)

(Claim 1, application)

A method comprising a first network computer (NC) client of a plurality of NC clients causing other of the plurality of NC clients that are subsequently booted from a network to receive a second operating system software that is configured differently than a first operating system software by replacing a first set of one or more system volumes maintained at a NC server containing the first operating system software with a second set of one or more system volumes maintained at the NC server containing second operating system software.
(emphasis added)

Because Patent 658 does not claim replacing a first set of one or more system volumes containing a first operating system with a second set of one or more system volumes containing a second operating system to cause other of the plurality of NC clients to receive the second operating system from the NC server that is different from the first operating system, as claimed by

Applicants, it is respectfully submitted that the Patent 658 and the instant application are not claiming common subject matter.

It is respectfully submitted that in view of the arguments set forth above, the double patenting rejection under 35 U.S.C. 101 over claims 1-11 of U.S. Patent No. 6,751,658 has been overcome.

Rejections Under 35 U.S.C. § 103(a)

Claims 1-15 stand rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 6,317,826 of McCall et al. ("McCall") in view of U.S. Patent No. 6,631,442 of Blumenau ("Blumenau").

McCall discloses booting a client computer from a network server by downloading a boot image containing an operating system from the server to a client computer and then copying a portion of an operating system from one location on the client's RAM to another location on the client's RAM. More specifically, McCall discloses

Thus, in the present embodiment, the bootstrap program preserves the interrupt vector state by copying the interrupt vector table 26 contents located in memory at address 0 to 400h to a location 30 alongside the RAM drive 24 for the boot image. When DOS starts, the boot image is modified as required, FIG. 2. A program "localboot", explained later, then restores the interrupt vector state from the copy 30 in RAM, before returning to reboot from the boot image stored in the RAM drive 24.

(McCall, Col. 2, Lines 57-65) (emphasis added)

Next, McCall discloses modifying a portion of the operating system on the RAM drive of the client computer. More specifically, McCall discloses that

The boot image 18 is generic and is used for all clients and all tasks. In one example, the generic boot image contains a batch file, "Switchset.bat", started from "autoexec.bat", which, if required, modifies the image in the RAM drive 24 according to the requirements of the client configuration. In the example, 2 files, config.sys and protocol.ini, are modified before a second boot by copying different versions of batch file, corresponding to different types of network adapter, depending on the network card

installed. "Switchset" then forces the client to reboot, with the command "localboot", from the modified boot image in the RAM drive.

(McCall, Col. 3, Lines 5-17) (emphasis added)

Next, McCall discloses rebooting the client computer from the modified boot image of the operating system on the RAM drive of the client computer without reloading the portion of the operating system image over the network. More specifically, McCall discloses

1. A client computer system adapted to connect to a server across a network, the client system including memory into which an operating system is loadable and being adapted to load at least a portion of an operating system image over the network from the server into a location in said memory and to boot from the operating system image in memory, wherein said client system is adapted to subsequently modify the operating system image in memory without reloading the portion of the operating system image over the network and to re-boot the client system from the modified operating system image in memory also without reloading the portion of the operating system image over the network.

(McCall, Col. 5, Lines 27-38) (emphasis added)

Thus, McCall discloses copying a portion of an operating system from one location to another location on the client's RAM, modifying a portion of the operating system on the RAM drive of the client computer, and rebooting the client computer from the modified boot image of the operating system on the RAM drive of the client computer. Accordingly, McCall does not disclose, teach, or suggest a first network computer client that causes subsequently booted network computer clients to use an operating system, which is different from the first operating system by replacing a first set of one or more system volumes maintained at a NC server containing the first operating system software with a second set of one or more system volumes maintained at the NC server containing second operating system software, as recited in claim 1.

Blumenau discloses a completely different system and completely different methods than claimed by Applicants. Blumenau, in contrast, discloses host computers, which interface to a

data storage system by using reconfigurable volumes for access to the data storage system. More specifically, Blumenau discloses

In another configuration of the data storage system, the memory is coupled to the host interface and the storage device interface and the memory contains a volume. The volume contains a plurality of sets of access information allowing a plurality of specific computing devices to access data stored on the at least one storage device according to the a particular arrangement associated to each of the plurality of computing devices. Also provided is a means for storing access information for at least one storage device. The access information is specific for each of a plurality of computing devices that can access the at least one storage device. This configuration allows different host operating systems to directly interface and simultaneously access the same volume, since the access information required for each host is maintained for each storage device within the volume.

(Blumenau, col. 9 lines 45-61) (emphasis added)

Thus, Blumenau discloses various host computers with different operating systems that simultaneously access the same volume of the data storage system. Blumenau, similarly to McCall fails to disclose, teach, or suggest a first network computer client that causes subsequently booted network computer clients to use a second operating system, which is different from the first operating system by replacing a first set of one or more system volumes maintained at a NC server containing the first operating system software with a second set of one or more system volumes maintained at the NC server containing second operating system software, as recited in claim 1.

As discussed above, it is respectfully submitted that McCall does not teach or suggest a combination with Blumenau and that Blumenau does not teach or suggest combination with McCall. It would be impermissible hindsight, based on Applicants' own disclosure, to combine a method of McCall and with a method of Blumenau.

Furthermore, even if McCall and Blumenau were combined, such a combination would still lack a first network computer client that causes subsequently booted network computer clients to use a second operating system, which is different from the first operating system by replacing a first set of one or more system volumes maintained at a NC server containing the first operating system software with a second set of one or more system volumes maintained at the NC server containing second operating system software, as recited in claim 1.

Therefore, Applicants respectfully submit that claim 1 is not obvious under 35 U.S.C. § 103 (a) over McCall in view of Blumenau.

Given that claims 4-6 depend from independent claim 1, Applicants respectfully submit that claims 4-6 are likewise not obvious under § 103 (a) over McCall in view of Blumenau.

With respect to claim 2, McCall discloses copying a portion of an operating system from one location on the client's RAM to another location on the client's RAM and modifying a portion of the operating system on the client's RAM by the client. McCall fails to disclose, teach, or suggest a network computer (NC) client creating a working copy of one or more system volumes on a NC server by copying the one or more system volumes to a storage area separate from the location of the one or more system volumes on a NC server, the one or more system volumes containing operating system software that is utilized by each of the plurality of NC clients; and the NC client causing each of a plurality of NC clients that are subsequently booted from a network to utilize a same single modified operating system by modifying the working copy and replacing the one or more system volumes with the working copy, which is created on the NC server, as claimed by Applicants.

As discussed above, Blumenau, similarly to McCall, fails to disclose, teach, or suggest such limitations of claim 2.

Consequently, even if McCall and Blumenau were combined, such a combination would

still lack such limitations of claim 2.

Therefore, Applicants respectfully submit that claim 2 is not obvious under 35 U.S.C. § 103 (a) over McCall in view of Blumenau.

Given that claims 7 and 8 depend from independent claim 2, Applicants respectfully submit that claims 7 and 8 are likewise not obvious under § 103 (a) over McCall in view of Blumenau.

With respect to amended claim 3, McCall fails to disclose, teach, or suggest creating a working copy of the one or more system volumes on the NC server by copying the one or more system volumes to a storage area separate from the location of the one or more system volumes; and modifying the operating system software supplied by the NC server to subsequently net-booted NC clients by modifying, by the NC client, the working copy and replacing the one or more system volumes with the working copy on the NC server.

As discussed above, Blumenau, similarly to McCall, fails to disclose, teach, or suggest such limitations of amended claim 3.

Consequently, even if McCall and Blumenau were combined, such a combination would still lack such limitations of amended claim 3.

Therefore, Applicants respectfully submit that amended claim 3 is not obvious under 35 U.S.C. § 103 (a) over McCall in view of Blumenau.

Given that claims 9 and 10 depend from independent amended claim 3, Applicants respectfully submit that claims 9 and 10 are likewise not obvious under § 103 (a) over McCall in view of Blumenau.

Because amended claims 11-14, and claims 15-21 contain at least the same limitations, as discussed above claims 1-3, Applicants respectfully submit that amended claims 11-14, and

claims 15-21 are likewise not obvious under 35 U.S.C. § 103 (a) over McCall in view of Blumenau.

It is respectfully submitted that in view of the amendments and arguments set forth herein, the applicable rejections and objections have been overcome. If there are any additional charges, please charge Deposit Account No. 02-2666 for any fee deficiency that may be due.

Respectfully submitted,

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